CONDUCT OF OPERATIONS COURSE

Lesson Title: Routine Operations

Reference:

(a) DOE 5480.19, Conduct of Operations Requirements for DOE Facilities
- Chapter 2 Shift Routines
- Chapter 3 Control Area Operations
- Chapter 4 Communications
- Chapter 11 Logkeeping
- Chapter 12 Operations Turnover
- Chapter 13 Chemistry and Unique Processes

(b) DOE-STD-1041-93, Guide to Good Practices for Shift Routines and Operating Practices

(c) DOE-STD-1042-93, Guide to Good Practices for Control Area Activities

(d) DOE-STD-1031-93, Guide to Good Practices for Communications

(e) DOE-STD-1035-93, Guide to Good Practices for Logkeeping

(f) DOE-STD-1038-93, Guide to Good Practices for Operations Turnover

(g) DOE-STD-1037-93, Guide to Good Practices for Operations Aspects of Unique Processes

Objective: Upon completion of this lesson:

1. Understand the requirements of DOE 5480.19 regarding routine shift operations at DOE facilities and associated impact on safety and efficiency of operations. (1.b)

2. Refer to a copy of DOE 5480.19 and locate applicable guidelines and requirements for specific activities. (1.a)

I. GUIDELINES

A. Components: DOE 5480.19, Chapters 2,3,4,11,12,13

1. Shift Routines and Operating Practices: establishes the overall framework for single and multi-shift operations.

- Status Practices:

- Safety Practices:

- Operator Inspection Tours:

- Round/Tour Inspection Sheets:

- Personnel Protection:

- Response to Indications:

- Resetting Protective Devices:

- Load Changes:

- Authority to Operate Equipment:

- Shift Operating Bases:

- Potentially Distractive Written Material and Devices:

2. Control Area Activities: establishes an increased level of formality over that required of shift routines. (The guidelines are intended for facilities that use centralized controls and communications.)

- Control Area Access:

- Professional Behavior:

- Monitoring the Main Control Panels:

- Control Operator Ancillary Duties:

- Operation of Control Area Equipment:

3. Communications: establishes formal emergency and normal communications protocol for process safety and control.

- Emergency Communications Systems:

- Public Address System:

- Contacting Operators:

- Radios:

- Abbreviations and Acronyms:

- Oral Instructions and Informational Communications:

4. Logkeeping: Establishes formal records for process control and event reconstruction.

- Establishment of Operating Logs:

- Timeliness of Recordings:

- Information to be Recorded:

    1) Facility mode or condition changes (e.g., shutdown, operations, run, startup, refueling, etc.);
    2) Criticalities and appropriate critical data (for DOE reactors);
    3) Abnormal facility configurations;
    4) Status changes to safety -related and other major facility equipment;
    5) Occurrence of any reportable events;
    6) Initiation and completion of surveillance tests;
    7) Entering and exiting operational limit actions;
    8) Security incidents;
    9) Out-of-specification chemistry or process results; and
    10) Shift relief.

- Legibility:

- Corrections:

- Log Review:

- Care and Keeping of Logs:

5. Operations Turnover: establishes a formal procedure to ensure that multi-shift facilities continue safe, efficient operations while changing personnel.

- Turnover Checklists:

- Operator Checklists:

  1) Facility power level, test status, or equivalent;
  2) Safety equipment status;
  3) Operational limits in effect;
  4) Maintenance, surveillance, tests, or evolutions (in progress or planned);
  5) Problems experienced with equipment and major equipment out of service;
  6) Changes in radiological or hazardous materials conditions; and
  7) Temporary procedure changes in effect.

- Operations Supervisory Checklists:

  1) Facility status;
  2) Evolutions (completed, in progress, or planned);
  3) Controlled key status;
  4) Abnormal lineups or conditions;
  5) Changes in radiological or hazardous substance conditions;
  6) Surveillance tests planned or in progress;
  7) Maintenance planned or in progress; and
  8) Waste management status.

- Document Review:

- Control Panel Walkdown:

- Discussion and Exchange of Responsibility

- Shift Crew Briefing:

- Reliefs Occurring During the Shift:

6. **Chemistry and Unique Processes**: ensures operators understand process parameters and able to take appropriate measures to control the process.

- Operator Responsibilities:

- Operator Knowledge:

- Operator Response to Process Problems:

- Communication Between Operations and Process Personnel:

II: CONOPS Review

Answer the following questions using DOE 5480.19:

1. What actions/observations does an operator take/make during an inspection tour?

2. What should an operator do prior to resetting a protective device?

3. What is the difference between a round sheet and a log?

4. Who would be responsible for increasing the rate at which an evaporator processes water?

5. What is a "shift operating base"?

6. Who is responsible for determining what is potentially distracting written material and devices?

7. What is the difference between the control area and the "at the controls" area?

8. Why should the facility public address system be administratively controlled?

9. With respect to logkeeping requirements, what is a "key shift position"? Is it defined?

10. Are logs required to be retained?

11. How are logs correc ted?

12. Who is responsible for reviewing logs?

13. What should the overall objective be when conducting a shift-crew briefing?

14. At what point should an on-coming operator or supervisor state that they have assumed responsibility for the shift position?

15. What type of information should be contained on a shift turnover checklist? Give specific examples.

16. Should operators be responsible for monitoring trends of key process parameters? Explain briefly.

NOTES